

# The Interplay of TVET and Formal Education

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## Abstract

TVET and formal education have no formal relationship till these days especially in developing countries. In this way, they can't develop adequate and efficient manpower that are needed for them. We need to establish the relationship between these two methods of education; then only we can produce better manpower. We need to produce transferable manpower by providing both educations to a person. Mainly, traditional practices of TVET models need some improvement as it can't allow learner to move further to admit in higher education. This article aims to promote both education systems by analyzing it using secondary sources.

**Keywords:** TVET, formal education, transferable skill.

## Introduction

Technical and vocational education and training (TVET) has got its influence from 1980s decade in the field of education. It emerged when there was the failure of general education to provide employment to the graduated. It was evidenced that the rate of employment of TVET is quite higher in comparison to the general education. Almost 70% graduates of TVET are employed as we see the record of different countries (Lamichhane, 2012).

The talk of general and TVET education has been a debate since long. Mostly, people have rated general education at the first rank rather than TVET education (Lamsal, 2013). Truly speaking, general education is the first requirement of young children. It needs strong background of general education to strengthen the TVET education. However, there is the need of TVET education after the completion of basic education mostly for the underachieving children. Some developed countries like Germany, France and Switzerland have incorporated TVET and formal education to educate their children after basic level. It has been recognized as the dual system of teaching. Unlike in some developing countries, these countries have given equal chance to both types of students to enroll in higher education. The persons who have completed general education also admit in vocational education to acquire knowledge about the world of work (Winch, 2013).

People have taken TVET education as second chance education as it has been learnt in adult age. It has different features in comparison to the general education. Children get same type of education from the prescribed course books in general education. In contrast TVET has given focus on the employment or it has related with individual interest. Not only that, it is also area as well as place specific (Rood, 2014). People have learnt skills that are needed for them or which has given more interest to them. So it has taken more features of adult or transformative education. Experience and work-based learning have played major role in transformative education which we can find in TVET. On the other hand, it has been trying to include transformative approach in formal courses as well which is not so successful as the quality of students can't meet such criteria like in TVET.

The interplay of general and TVET is intrinsic as well as relational in its structure and purpose respectively. Their structure is almost same because they have needed formal course, students, teacher, classroom etc. They are totally different in purpose as they have represented two aspects of education i.e. theory and work-based. The main feature of TVET education is work-based learning that is one of the ideologies of transformative learning. On the other hand, general education has projected students to provide basic literacy and numeracy skills. In addition TVET has provided job related education beyond literacy and numeracy. Thus we can see somehow same as well as different purposes of general and TVET education. The subsequent topic has spread the light on the emergence of TVET in the world.

## Emergence of TVET

TVET first emerged along with the industrial revolution of Europe and North America as there was lack of skilled manpower needed for industries. So it has certain purpose to produce technical manpower which basically refers to the lower level of employment in contrast to higher level employment opportunities. The role of TVET can be directed to promote technical as well as lifelong learning to have greater attraction to the field. Though people have the concept to get job after education, they don't accept TVET as they have inferiority complex in their life (Tikly, 2013). TVET stands as a key approach to create job in the globalized world as it has created new imperatives to the nations, societies and persons. There is a need to take it beyond the traditional norms and values of education as it is being much valuable in educational field. Or it has been able to transfer the meaning of education from formalization to the informal and non-formal approaches. In other words, it has focused on skill development which becomes fundamental in our life.

According to Cavanagh, Shaw and Wang (2013), TVET has addressed two types of requirements: firstly it has conducted short term training to the youth and adult related to work. Secondly, it has conducted long term training for sustainable or lifelong living. Since it focuses on the vocational and training aspect of students they

have taken it different than formal education. Thus vocational education is considered as a lower-prestige alternative to academic secondary schooling by young people (Adhikari, 2013). Unless we aren't transformed, it leads to blue collar jobs in contrast to white collar jobs. To attract people to TVET, we need to develop higher-order skills of reasoning, conceptual problem-solving and communication skills to them as supported by knowledge economy of the present context. So we need transformation of such mindset in which everyday practice should be viewed as life giving force from the perspective of learners so that we can change recognition of prior learning (RPL) also into vocational skills to make it prestigious commercial job. If we can transform the 'situated activity' within a 'community of practice', we will be able to evolve job opportunities in our community or the country (Gamble, 2013). Unless we can't transform the concept of people related to TVET by raising some options, the public perception can't be changed. As a corollary, people remain jobless or their attraction will be towards formal education only.

The focus of TVET is to transform people from 'educational' to 'functional' world of education (Maclean & Pavlova, 2013). In this way, vocationalization of traditional skill and knowledge has also prepared students for the world of work better than the 'academic' education. Thus the development of TVET along with the level of formal/academic education can have maximum output to increase the employability of graduates. Most of the countries provide TVET at the upper secondary level taking it as an optional subject. Thus the involvement in TVET education is quite less in developing countries (it is only 2% in Nepal and 3% in India). The originality of vocational education and higher education came from contrasting traditions in which universities produce theoretical manpower, and vocational education provides training for particular occupations. We need paradigm shift on vocational education that can focus on theoretical aspect of education to functional only. Nowadays, it has been increasing its scope as the role of formal education has been contracted or being less functioned to create job (Kusgo & Phuyal, 2009). TVET is being attractive to all those who want to enter into the world of work through vocational education and training. Or it has given an adequate alternative in the field of education as it has helped to enter into higher education or to learn skills. Though TVET has been thought to be an unattractive educational option compared to higher education, it's getting central position in these days.

Maclean and Pavlova (2013) have identified three elements of vocational education. They are: "general work-related competencies, specialized studies, and the pre-profiling programme" (p. 61). The above concept needs some improvement in these days to make TVET popular among learners. We need to include the elements of soft skills such as "political, epistemological, and individual" paradigms to make it acceptable among learners (p. 69). We can take example of Germany where bachelor's degree completed students undergo an apprenticeship in order to get employment opportunity (p. 70). In this way, we can include two factors in TVET education i. e. general stream as economic development and cultural traditions like in developed countries for its development. The following topic will highlight the relation between general and TVET education in detail.

### **TVET and Formal Education**

Politically, TVET helps to ensure freedom, equity, security and dignity of the people creating decent work conducting own enterprise or business (Bhandari, 2013). To illustrate about technical and vocational education, it's better to compare it along with its counterpart i.e. formal education. We send our children to school to learn basic literacy and numeracy skills; they would even learn about science and nature, politics and society, language of the nation, civil rights and duties, international relations and so on. Mostly formal school provides 3R (Reading, Writing and Arithmetic) rather than vocational courses. In some cases they have been even provided some vocational subjects as additional courses which are insufficient in the world of work. General schools' basic level literacy and numeracy skills can be a good foundation for vocational skills. Thus formal schools provide the background for further achieving skills like vocational skills in the life of people. In this way, there is a need to combine both knowledge and skills for people in the form of general TVET to make it more sustainable and result oriented. We can create the mixture of traditional knowledge with formal education to make it more reliable among the learners. The learning process of an individual has greatly changed in this era as it has been personal or situational. The persons are interested to learn only if the education has added value in their life. TVET helps in putting value to increase the capacity of a person according to their demand (Williams, 2012).

German, France and Switzerland's dual systems of TVET are best examples that include both formal and informal learning to make skills popular among students. On the other hand, work-based learning is another aspect of developed countries which is one of the forms of transformational learning promoting lifelong learning of the worker along with vocational skills. It means a person is transformed with his own interest after the realization of his area of learning and situation. According to transformation, learning is individual and that aims to address the interest, aptitude and behavior of any person (Kafle, 2014). Actually, learning and work are intertwined, on a lifelong basis as people have known formally, informally or non-formally in course of reading, working or training. They have even learnt from their social environment or from their own experience as well. The clever one can be forward in lifelong learning careers as one has constructed his knowledge rather than the process of knowing straightforwardly throughout the life. Modern TVET can address both aspects of learning through work and from

schools or universities (Watts, 2013). We need to be able to ensure people or to guarantee their life sustenance from the education or work what they have learnt to win their support. TVET can promote innovation and self-reliance of learners by increasing the employability of students or trainees empowering them with relevant skills needed for the labour market.

On the other hand investment in basic education provided a much higher rate of return than did investment in secondary or vocational education. The investment in TVET is much higher or almost four times greater in comparison to the formal education as it has needed additional equipments and less number of students. We can find the sense of transformational education in which the interest and requirement of the students have been addressed. However, the growing youth unemployment and the growth of the informal sector have failed the motto of basic education as it can't ensure basic skills. So we need TVET along with the mixture of formal education to enter the students to the world of work along with the development of basic competencies. To address the negative side of the formal education, we need TVET which can be an alternative way of thinking in the field of education and employment. Thus TVET, in these days, is often considered as a way of "developing of skills, aptitudes and competences" along with the help of formal education system (Tikly, 2013, p. 23). TVET is thus stands as an alternative to the general education rather than alternance which has rated TVET as second chance education. If we can develop TVET in an alternance to alternative form we can combine the formal and vocational education together so that the field of TVET can be broad and effective. In this way, the dual system of education like in France, Germany and Switzerland is applicable; it can also combine higher education along with TVET.

A prominent feature of TVET is to instruct us to change work into occupations so that people can be attracted towards it. The provision of learning through work is central to TVET, hence the concept of transformational learning is proved well. In other words TVET helps to promote practice-based learning experiences in the life of learner. Practice-based experiences can direct students to select the job of their interest, and they will be changed from their general misconception to the real world of work. To promote such qualities, two kinds of pedagogic practices are in practice according to Billet (2013) which are: direct guidance by experts and workplace activities. The first one can't transform the students as it has been the guidance of the experts. The second practice can guide them to the world of work themselves or it has illuminated them well to be an occupation holder. In other words, "learning through practice is extremely important for achieving governmental, societal, workplace and personal goals" (p. 153). It hasn't been regarded as an important activity in the life of the student as it has been undervalued by the society and it also lacks the legitimacy from schools or colleges. The schools and colleges have been guided by conventional theory of didactic teaching learning method which has also transformed vocational education to classroom-based education. It is totally wrong in TVET education as it has tried to come out of the conventional theory to bring transformation in the field of education. There are different models of TVET which have been explained in the following topic.

### **Models of TVET**

Sweet (2013) suggested three models of vocational education as apprentice, alternance and recognition to prior learning (RPL) which have been practicing since long. We have been underestimating the practices which we have been practicing since long. People are still in confusion between two ranges like informal apprenticeship-type arrangements at one side to formalized apprenticeship arrangements at the other. Between these two extremes people are rather forced to follow the first type rather than taking the second one as their life giving ointment. So we need a great deal of change in the concept of the people to make them realize the importance of work. The concept of apprenticeship is possible only in the workplace in which the students feel their involvement either with payment or voluntarily.

The alternance model has been applicable in two places i.e. colleges or schools and field. Students learn theoretical knowledge in college or school and practical knowledge at the field. This model is applicable to make conventional method of teaching as modern. It is partly applicable in some context that is insufficient in these days as the students have reacted that the practical work is less in these methods (CTEVT, 2016). It can't build the confidence of the students like in apprentice and RPL. The fact is that alternance has directed the traditional course towards work-based learning in some context.

In RPL method artisans learn it themselves, mostly from their ancestors or seniors. In other words, it is inherited from informal apprentice mode with certain differences. We can rate this method as inborn qualities of the artisans which take work as learning-rich program. The students would learn from "own experience, guidance by other workers and by experts, using mentors, demonstration and practice, simulation, task rotation and task variety, project work, and providing workers with problems to be solved" (Sweet, 2013, p. 193). In this way most of the vocational practices of the developing countries have depended on such method of learning. Thus RPL takes greater importance in such countries as one of the reliable methods of learning till this time.

The apprenticeship type of work is regarded as low-skilled occupations by the people as there is significant role of formal education to promote higher value of human capital. If we take the example of the United Kingdom, two-thirds of all apprenticeships in 2009–10 were only at Level 2 of the national qualifications framework (NQF)

(p. 179). The pure motto of TVET has been degenerated as the clerical and manual jobs though it has promoted employment and lifelong in a person's life. The data of Australia also proves the same; in 2009, 13 per cent of all apprenticeships were at the two lowest levels of the NQF, and 22 per cent were in either sales work or laboring. It proves that TVET has been misunderstood by the public so the rate of unemployment has been increasing. It has become a bonfire in the context of developing countries as they can't establish new fabric in education system (p. 179).

It will be better to follow alternance method of TVET and general education in an improvised form like in medical education unlike in other faculties to solve problem for a short time period. There is lack of understanding among people about the positive aspect of TVET education as they have been psychologically affected. So we need transformation or change in the concept of such people to have better output in the field of TVET. To increase the economic development of the country TVET has the responsibility to prepare workforce for competitive labour markets. The education is successful if it can address the need of the market or the learner is confident to do some gainful employment or own business. In the long run, we need apprenticeship method to ensure job to the learner which can be done from local areas and in local institutions only.

In many countries SMEs amount to more than 90 per cent of the total number of enterprises, and employ more than two-thirds of the labour force (Badawi, 2013). The traditional structure of apprenticeship is now recognized by the vocational education which was deliberately ignored by the formal/ theoretical education. Formal education has ruled like the umbrella act and TVET can work as one of the parts of such education in the past. In contrast TVET now has focused on the both aspects of education and it covers the whole aspects of education and employment. Thus the role of TVET is being broadened these days as it has included the education and training system both in its core in most of the developed countries. Still the developing countries can't develop it as an imperative to job education. Hence TVET occurs at different levels within the formal education system also. Considering it in mind, most of the countries have implemented national quality framework (NQF) in their countries. It has legalized or popularized their indigenous technologies which were learnt through RPL (Renold & Caves, 2017). The next topics will see the fusion of formal education and TVET.

### **Mixing Formal Education and TVET**

We can find different social fabrics in different communities; however it seems somehow same in the context of development, education, employment and positive change in this era. To live better life with modern amenities, we need education first which can enhance skill for us. With the breakdown of formal education to produce skilled manpower, we need an alternative education to fulfil the gap. Societies or countries can step forward if they have skilled manpower to run large or small scale industries. Not only that skilled manpower is also the need of global economy as well. It is reported that more than half of the world's economically active population is dependent for their livelihood on agriculture (Kusago & Phuyal, 2009). These people mostly reside in rural areas so there is a huge disparity between rural and urban areas which could create imbalance in the social structure.

Different areas need different sorts of manpower according to the need of the industries and the resources it has contained. TVET in these days should recognize the need of various human resources, societies, industries, or natural resources to utilize them efficiently. The industry of herbs in the Himalayan can't fit with the industry which produces rice grain in the plain region. TVET can produce such manpower who has transferable skills to address the demand of different industries. It needs more time to impart transferable skills because it can be developed only with the mix of formal and TVET education. It also needs more cost to produce such type of skilled manpower thinking differently from traditional concept of schooling. We need to change the schooling discourse from formal to work-based as the definition of development is changed from top down model to inclusive or diversified as per the need of the locale. Only transformative knowledge and mind can address such problem. We don't need only change in physical structure, rather transformation is needed in political, social or economic areas for which formal education is only insufficient. It needs special type of education which can address the need of local development along with the change in person.

TVET needs to be more effective and influential to provide people with different skills and knowledge for their living or survival. It can guarantee its skills and knowledge "to shape the transformation of society" (Cavanagh, Shaw & Wang, 2013). In this sense, we need to reform the rural areas understanding the possibilities of them utilizing local manpower that are the representative of authentic need and interest. There is the need to adjust curriculum and teaching methods to our cultural context. We need to vitalize the informal educational institutions like community learning centers (CLC) to mobilize local resources and manpower to get better output. Local areas can be planned and managed by the local people so that it could vitalize the local economy and their own traditional knowledge and equipments. Moreover, they would be able to realize their own needs and interests. We can transform the society only with the change in individuals, and then they can collectively change the society. The role of TVET is to provide skills or knowledge to a person so that it could stimulate others with demonstration effect. Hence, there seems the need to change TVET according to the need of local areas.

The world experience shows that the Japanese workers experience more transferable skills in comparison to

other Western countries. They have different system as they have delegated more effective responsibility to the lower tiers of the organizational hierarchy because of their effective informal learning style of vocational education (Sweet, 2013). It is evident that the experience and in-work training can be a remarkable way for workers to make their plans more effective. In-work training and experience can enhance the techniques like “work shadowing, research projects about the nature of work, work visits, and carrying out real work tasks” (p. 171). In the context of schools and colleges, the alternance model is being used where students have visited work place for practical work and institutions for formal study. However, it is insufficient in the context of developing nations. The combination of work and study together can be a good exchange of formal and vocational education to establish new fabric in the society. Connection of vocational education and training and formal education can be regarded as a “well-organized systems of work-based learning” (p. 177).

Mostly, we can't find the connection of work-based learning with the classroom activities into the curriculum instead it was predetermined curriculum. Thus we can't find possible transformation in the curriculum and in educational institutions. Work-based learning has positive as well as negative influence to the learner. The negative aspect is that learners can't be promoted like in formal education. The positive aspect is that one can learn skill to be independent their life. Unless we don't have workplace culture, we can't prove work-based learning as the better way of vocational education. It has created a barrier to evolve an apprenticeship system in Korea in the 1980s due to the preference of formal education.

In most of the developing countries, we can see the development of informal apprenticeship which doesn't promote the work-based learning approach rather it is like leisure activity. Hence it has been better for some persons only; neither is it legitimized nor has the country got benefit. They are also not recognized by the formal institutions so they have either practiced less or on the verge of extinction. It needs effective management to provide certification of informal work-based learning and formal education. The next topic will make clear about the role of TVET and labour force planning in detail.

### **TVET and Labour Force Planning**

The first investment of World Bank in sub-Saharan Africa was taken as “a crucial component of labour force planning” though the investment in TVET education has broad value ((Tikly, 2013, p. 5). It was thought that the vocational education was the outcome of the colonial time period; so most of the countries didn't prefer it due to the imposed education by the colonialist. The aim of TVET was deliberately misunderstood by the developing countries just after the post-independent era. Ignoring the fact the developing countries have not properly utilized TVET education as their development partner. Nowadays it has become more imperative for the preparation of workforce in the developing countries and they have been in reverse position.

On the other hand, human capital studies have also proved that “educated farmers and workers are more productive” (Sharma, 2013) and they also earn more in comparison to uneducated one. The traditional human capital theory ignores the manual and clerical jobs and the role of TVET was misunderstood in this context. Taking reference of Amartya Sen, Tikly (2013) referred that TVET has the capacity to enhance capability to the commoner as different people have different abilities or expertise along with their local context. The role of TVET should have addressed them to increase their value. If we can direct the role of TVET to address the need of “women, the poor, rural dwellers, indigenous people, members of religious and cultural minorities, and learners,” (p. 30) the social fabric can be changed greatly. Those excluded from the mainstream of the politics, society, and economy can attain the mainstream of their society.

Maclean and Pavlova (2013) argued that the vocationalization in education “depends on the level of economic development and cultural specificities” (p. 42). They have clearly divided the societies into two categories as rich and poor. The rich countries have planned manpower for industrial labour whereas the poor countries have no planning at all. If poor countries implement the human development policies with the help of TVET they can develop human resources not labours i. e. entrepreneurs. The developing countries' social structure would get a great revolutionary change in this aspect. It's an irony that the developing nations' people have got developing mind so that the elite and middleclass people don't take TVET as good education as they have been running after colonial concept. The Indonesian example has proved that the socially excluded group or poor people have higher participation in vocational education. It further states that 21 per cent of their students are from the poor economic background compared with only 13 per cent in general secondary schools (p. 46). If we can transform such situation ignoring the colonial concept we can establish new social fabric in developing nations. We need to integrate vocational stream with general education so that our manpower can contribute for economic development after the completion of secondary education. The experience of developed countries is important hereafter as they have dual education system to fulfil the need of human capital.

The social concept of human history is that “working for a living has traditionally been thought in many societies to be undignified” (Winch, 2013, p. 93). The concept still exists in the developing countries as a ‘stigma’ in comparison to the developed countries. The developed countries can compel their citizen to work from their countries whereas the developing countries can't compel them follow the rules. No society or country has preferred

to do manual works though they are economically very, very poor and socially backward. “TVET is a potentially attractive route for such governments if their aim is to develop an economy that relies on technical and vocational abilities” (p. 96). We need to bring vast changes in educational policies in which the ‘abstract’ concept of TVET should have been changed into the concrete decisions to have economic and social change of our countries. The countries where many of the students need TVET education have been given formal education ignoring the fact. The need of labour market has been ignored deliberately or the system has been failed to have better planning. These countries have been sending unskilled or semi-skilled labor in the market so they have been remaining poor throughout their life. Some people have learnt apprenticeship from informal source without getting any help from schools or formal institution, others remain unemployed.

The people of developing countries have also no such tradition to formalize the work-place learning as they have taken it as informal or ad hoc process of learning. We can develop the labours’ capabilities by “engaging in work tasks; indirect guidance provided by the setting; practice within that setting; and the close guidance of other workers and experts” (Billet, 2013, p. 135). The work-based learning has various benefits to the learner or one can practice themselves with their own effort. In other words we can call it as learning-rich program which can be more sustainable. The developing nations don’t have such social culture so they need to promote and make it more systematic to respect labour force.

### Conclusion

TVET is a ridiculous genre of those who have been practicing general education in their life. It has taken different aspect in comparison to the general education so it remains mystery to some who have been habituated only on conventional education. It has been equally practicing by the developed and developing countries in this era. The aim which formal education can’t fulfil can be fulfilled by the TVET as it has focused on employability. The emergence of TVET is the failure of general formal education. However, we can’t deny the role of formal education as it has taken the responsibility of basic education.

TVET, on the other hand, been regarded as second class education in the society, so many people have rejected it due to their misconception. We need to make it popular among people about its positive and progressive nature to create employment opportunities in the society. By and large, it has taken radical improvement in the mindset of the learner. It has focused on work-based learning which is the feature of adult or transformative learning. It has been being imperative in this era as the education can’t produce good result though there is huge investment in this sector. It is also thought as the education to be provided to the underachieving or failed students from formal education. This concept has already been challenged by the developed countries establishing dual educational system. So we can realize the need of the combination of both types of education.

TVET mostly focuses on the development of skills; only skill development can’t solve the problems of present unemployment as the employers have wanted general characteristics like communication skill, attitudes and honesty of the graduates. The skill given by TVET is known as hard skill and the skill given by formal education is soft skill. Hence we need the combination of both skills to produce transferable manpower in the country. The transferable manpower can fulfil the need of the competitive era. Employers and the employee often blame that the production of educational institutions is often redundant due to lack of either skill. If we can instruct both of the skills, they will be competent to get gainful employment.

Moreover, TVET can help to produce entrepreneur which is the distinct feature of it in contrast to formal education. The development of nation lies in the hand of adults who have got skills in their hand. In this way, the boundary of knowledge is limitless; however, we can meet the need building capacity through TVET education. Hence the development of the country is possible with right education, right person, and right skill in right place.

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